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SMALLHOLDER IRRIGATION MARKET INITIATIVE (SIMI)

EVALUATION REPORT

July 30, 2009

This publication was produced for review by the United States Agency for International Development. It was prepared by Frances Klatzel and Dr. Gana Pati Ojha.

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ABBREVIATIONS

BDS = Business Development Services
CC = collection center
CEAPRED = Center for Environmental and Agricultural Policy Research Extension and Development
CFUG = Community Forest Users Group
COC = code of conduct
CTEVT = Council for Technical Education and Vocational Training
DADO = District Agriculture Development Office
DAG = disadvantaged group
DFO = District Forest Office
DLS = Department of Livestock Services
DOA = Department of Agriculture
DoLIDAR = Department of Local Infrastructure and Agricultural Roads
DOLS = Department of Livestock Services
DWSS = Department of Water and Sewerage
FCHV = Female Community Health Volunteers
HH = household
HLCIT = High Level Commission for Information Technology
ICT = Information and Communication Technology
IDE = International Development Enterprises
IPM = integrated pest management
IPM CRSP = Integrated Pest Management Collaborative Research Support Program
LRPs = local resource persons
MIT = micro-irrigation technology
MLD = Ministry of Local Development
MOAC = Ministry of Agriculture and Cooperatives
MPC = Marketing Planning Committees
MUS = multiple-use water system
NARC = National Agriculture Research Council
NGO = non-governmental organization
NRs = Nepali rupees
NTCDB = National Tea and Coffee Development Board
NTFP = non-timber forest product
OVC = Other Vulnerable Children
PLA = participatory learning and action
SAPPROS = Support Activities for Poor Producers of Nepal
SIMI = Smallholder Irrigation Marketing Initiative
TOT = trainings of trainers
VDC = Village Development Committee

EXECUTIVE SUMMARY

This report provides an evaluation of the **Smallholder Irrigation Market Initiative (SIMI).** The project was started in 2003 through a cooperative agreement funded by USAID, which gave further funding to extend SIMI until September 2009. The last extension incorporated the activities of previous USAID projects in NTFPs, coffee, tea, livestock, fisheries, and other income-generating activities.

USAID budgeted an estimated $9.026m for the entire period, subject to the availability of the funds. As of May 2009, it had obligated and committed a total of $8.841m. The prime implementing partner was Winrock International working with International Development Enterprises (IDE), CEAPRED, SAPROS, AEC, and other local NGOs.

In the **context** of Nepal, agriculture accounts for 80% of employment, but increasing numbers of families cannot produce sufficient food on small, marginal landholdings. From 1996 to 2006, insurgency and counter-insurgency activities affected most districts and the movement of people and materials. SIMI endeavored to be "conflict resilient" by focusing on small farmers, providing tangible benefits, and involving a diversity of community members.

SIMI utilized the **value chain approach**, integrating interventions from agricultural inputs to market support. The entry point of the project was providing access to micro-irrigation technology (MIT). In all components, farmers got skills training and close technical supervision from SIMI staff. They were well linked with supply and marketing systems in order to get good-quality seeds and to sell products at competitive prices.

By 2009, SIMI had **three working modalities** — heavy, medium, and light — with varying degrees of DADO, SIMI, and NGO staff involvement. The light districts have only one SIMI team staff member who supports the DADO Service Center staff to implement the activities. Districts where previous projects were being implemented have been integrated into SIMI as medium districts with NGO implementation.

The **purpose of this study** was to assist project stakeholders in better understanding how the activities and approaches can be replicated and improved. The team employed qualitative techniques to gather information and perspectives relevant to the objectives of the evaluation from a wide range of respondents.

SIMI's many **achievements** included a 50% increase in rural income for poor farmers, and a model for program management, which creates public-private partnerships and collaboration. SIMI had several indicator targets to monitor its outputs and impacts.

As of April 2009, it had facilitated the adoption of micro-irrigation by over 63,000 households and provided technical assistance through 3,294 farmer groups in 302 VDCs of 18 districts. With improved agriculture technologies, many farmers increased their cropping intensity for increased income. However, most mentioned water supply as a difficulty.

A strength of SIMI was that **linkages and coordination** with a wide variety of actors — farmers, GoN, local government, NGOs, and the private sector. The partners formed a "SIMI Team" with specialist professional staff in each field.

The **time frame and extensions** of SIMI were very short throughout its implementation. It started three years of implementation in 2003, then was extended for one year in 2006, and then for another two until September 2009. These uncertainties often limited the provision of complete training and follow-up to farmers who had more recently acquired MITs. Various

respondents suggested that a time frame of three to five years is necessary for follow-up in order to strengthen the groups and build the capacity of the farmers for sustainability.

The project **coverage** is about 10–15% of the VDCs in a district and about three of nine wards in a VDC. The overall average number of households per VDC is 198. The reasons for this are limits to the project budgets, as well as SIMI's approach of working with farmers close to the roads for market accessibility.

SIMI's **monitoring** activities appear to consist mostly of tracking performance indicators for outputs in terms of numbers of MITs installed and farmers trained. It appeared to have very strong monitoring of agriculture production and income from marketing agricultural production. However, the monitoring of processes did not appear to consider the qualitative outcomes of the activities.

Marketing is a major component so that producers supported by SIMI can sell their products through a collection center managed by the Marketing and Planning Committee (MPC), which contacts traders who purchase vegetables wholesale and transport them to markets.

Apex MPCs are located in district capitals that serve as wholesale collection centers and lobbying and advocacy arms for a network of local MPCs operating throughout a district. Some concerned stakeholders revealed that production was not going to the collection centers from all producers' groups, mainly due to distances and scattered service centers.

Social mobilization was carried out by NGOs working with SIMI in the districts in order to market MITs and mobilize the communities to form farmer groups where they did not pre-exist. An estimated 40% of SIMI groups were formed through the project. The availability of tangible benefits, especially when subsidized by the line agencies, expedited the social mobilization.

A lesson learned in several other programs is that NGOs have better skills and aptitudes for social mobilization. SIMI followed this model in the heavy and medium districts, but not in light districts, where the GoN staff did both technical and social interventions.

Although SIMI aimed to benefit smallholder farmers, our limited field visits suggested that the participation of the poor was sometimes hindered by various factors, including a lack of coordination between SIMI and existing cooperatives, which could have provided extra support for the poor. SIMI leveraged funds from varied sources to provide revolving funds to groups of poor women. Although it reported a 100% repayment rate, problems were noted in three of three revolving fund groups visited.

The **Other/Orphans Vulnerable Children** (OVC) component within SIMI worked with local NGOs to train FCHVs and health workers and establish women's groups that would meet weekly for health education classes.

The **efficiency** of SIMI can be considered by the fact that over 96% of the project budget was spent on vegetable production activities involving almost 95% of the population of the target households during 2003–2008. The benefit-cost ratio (BCR) of overall project activities is 1.67, while that of vegetables is 1.63. The enterprises that benefited 3,365 households (5%) would have had significantly more benefit per household to change the BCR. This indicates that future investment in other enterprises could be made at a larger scale to offer somewhat higher increases in income. The project has spent about US$104 per annum per household and has generated US$184 for a return on investment from USAID of 4:1.

The project operated in the field using different partnership modalities and leveraging resources from related stakeholders for some SIMI activities. To provide services from specialist staff, it leveraged some staff costs from other projects of Winrock and IDE, which also helped SIMI to be less costly. However, with the involvement of two international organizations and several

large national organizations, the central-level expenditure is almost 40% of the total. The project spends about one third of its budget for administrative purposes.

Building on the Strengths of SIMI (2003–2009)

1. **Value chain approach:** SIMI's agriculture value chain approach raised income from the production and sale of vegetables and other products. It built on the past achievements and experiences of the projects that the lead agency and partner organizations achieved in the past. Establishing business relationships between farmers and service providers and the private sector led to greater sustainability and higher-quality services.
2. **Synergy through coordination and linkages:** By implementing and institutionalizing interventions at the local level and in the private sector, SIMI maximized community and individual ownership and consolidated resources of stakeholders to implement SIMI targets.
3. **Integrated management and staff:** The SIMI staff consisted of several individuals from various organizations who worked together as a team.
4. **Flexibility:** The Cooperative Agreement for SIMI meant that the primary partner had a relatively open environment for solving problems and developing linkages.
5. **Requiring mechanisms for transparency and accountability:** The construction of "common" property structures requires official mechanisms for transparency and accountability, such as public audits.
6. **Building the capacity of GoN to work as a facilitator:** Future projects could benefit from capacity building of GoN staff members and institutions to function as facilitators and coordinators.

Lessons Learned and Recommendations for the Future Program

1. **Build on success:** Continue and strengthen the successful project design and components of SIMI, especially the value chain approach, capacity building, and strong linkages and coordination.
2. **Develop a longer-term time frame** in at least five-year phases so that activities and outcomes can be followed up and consolidated in the rural areas.
3. **Invest in water:** Expand and support interventions to promote the availability and accessibility of water in the program and in surrounding communities. Investments in the accessibility of water allow a holistic entry point for a program, which can then target the poorest households for MITs and IGAs.
4. **Improve social components:** Revise, improve, and strengthen social mobilization, gender and social inclusion, micro-credit, and monitoring of outcomes.
5. **Examine how coverage might affect conflict**: The concentration of resources in relatively few wards and VDCs of each project district could create a sense of exclusion in other communities, which might warrant a thorough examination of how this might affect future potential conflict situations.

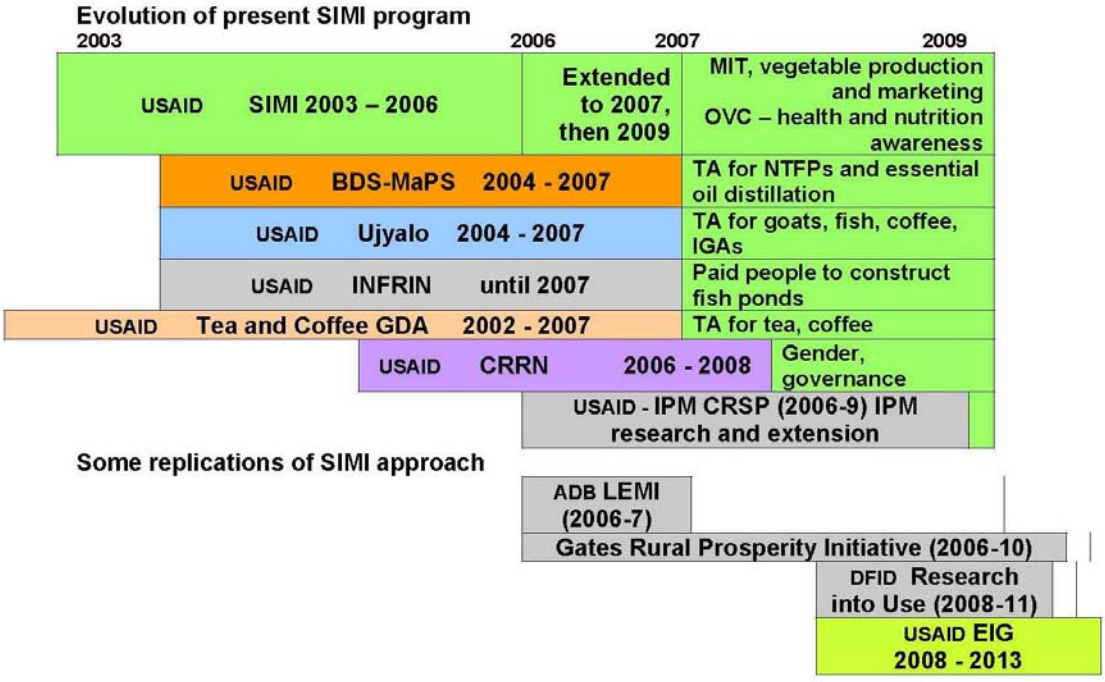
1. INTRODUCTION

This paper documents and evaluates the accomplishments, factors, and lessons learned from the **Smallholder Irrigation Market Initiative (SIMI),** which was started in 2003 through a cooperative agreement funded by USAID under SO1 *Increased Sustainable Production and Sales of Forest and High-value Agricultural Products*. The first phase of the project was implemented for three years in the Western and Mid-Western Development Regions of Nepal during a very difficult period of the decade-long armed conflict.

USAID gave further funding under SO9 *Enhance Stability and Security, Agriculture Productivity Increased for Improved Livelihood* (APIIL) to extend SIMI for one year and then for another two until September 2009. This last extension incorporated the activities of previous USAID projects working with value chains or marketing of NTFPs, coffee, tea, livestock, fisheries, and other income-generating activities (IGAs).

In this final phase, the SIMI project is being implemented in 302 Village Development Committees (VDCs) and 10 Municipalities of 18 districts. It covered 318 VDCs and 11 municipalities of 28 districts in 2007–08. However, it has three working modalities with varying degrees of SIMI and NGO staff involvement.

As illustrated in the diagram below, USAID integrated some activities of previous projects into SIMI as medium districts with NGO implementation.



1.1 Nepal Country Context

Poverty is still common in Nepal, although decades of development efforts and political change have brought down the proportion of Nepalis living under the poverty line from 42% in 1995/96 to 31% in 2003/04.[1]

Agriculture accounts for 80% of Nepal's employment, but as population pressures have grown, increasing numbers of families struggle to produce enough food on smaller and more marginal landholdings. They cannot grow enough to have food security for the entire year.

1. Central Bureau of Statistics, *Resilience Amidst Conflict — Assessment of Poverty in Nepal*, 2006.

As well, the lack of rural employment opportunities forces young and able family members to seek employment in the cities, in India, and overseas to earn income to feed their families.

From 1996 to 2006, an insurgency and counter-insurgency activities affected most districts of Nepal and the movement of people and materials. The implementation of all development programs faced several challenges.

2. SIMI PROJECT DESIGN AND IMPLEMENTATION

2.1 Goal and Objectives of SIMI and USAID Support

The SIMI project was funded under USAID SO1 and SO9. In the first three years of SIMI, the goal of USAID support under SO1 was *Increased Sustainable Production and Sales of Forest and High-value Agricultural Products*. It aimed to expand the number of small farmers producing high-value crops that have domestic and export market access. SO1 also aimed to promote the use of appropriate-scale irrigation and water management technologies to extend the growing season for off-season production.

The goal of support under SO9 was increased household income and livelihoods to mitigate the effects of the conflict by improving food security and addressing issues of poverty and social exclusion through local enterprises.

2.2 SIMI's Value Chain Approach

SIMI is unique relative to previous agricultural projects in that it utilizes the value chain approach, integrating all the necessary interventions to introduce appropriate technology, increase agricultural production, and market the products to improve livelihoods. The entry point of the project was micro-irrigation technology (MIT).

SIMI Component	Interventions and Activities		Expected Benefits and Outcomes
Value chain approach	**Sub-sector analysis**		Fills gaps in linkages to private-sector partnerships
	Related project activities		Application of VCA to coffee, tea, fish, herbs, etc.
Linkages and coordination	**Leveraging local government funds for agriculture**		Greater access to MITs for poor and marginalized people
Inputs	**MIT – entry point**		Formation of farmer groups Irrigation for small plots, increased production
	Training of service providers		Skills to support farmers in new activities — sustainable services
	Social interventions	**Leasehold land**	Access to land for landless women and marginalized people
		Revolving funds	Availability of capital for poor to purchase MITs
		OVC – literacy	Empowerment of women and improved knowledge of health issues
Production	**Training of farmers**		Skills to operate MITs, grow better crops
	Integrated pest management		Knowledge to manage pests for improved production and quality
	Plastic houses		Protection from hail to reduce risk of losing crops and increase production
Marketing	**Marketing Planning Committees**		Cooperative marketing allows farmers more time for production and reduces marketing costs.
	Apex bodies		Larger production attracts traders, reducing costs for farmers

1. At the **input level**, SIMI worked to develop the capacity of service providers, such as agro-vets, tradesmen, local resource persons (LRPs), private practitioners, and dealers and suppliers of the MIT equipment. It also facilitated the establishment of nurseries to provide seedlings to the farmers on a long-term basis.

   Water: Later in the project, SIMI conducted action research to develop point sources of water to facilitate micro-irrigation.

2. At the **production level**, SIMI provided technical capacity building to farmers.

3. At the **output level**, SIMI developed and enhanced the capacity of farmers and traders through trainings, exposure visits, interaction, and workshops. It also worked to:
   - establish collection centers (CCs);
   - form and build capacity of Market Planning Committees (MPCs) and apex bodies, and support for cooperatives;
   - develop systems of providing price information to producers from various sources;
   - develop linkages with national and international buyers; and
   - develop a code of conduct for specialty tea and organic certification of coffee.

Other USAID-funded projects being implemented by the Winrock-IDE consortium had promoted a variety of products, including vegetables, livestock, NTFPs, tea, and coffee. The activities to promote the value chain for these products were incorporated into SIMI when the other projects closed in 2007.

2.3 Implementation modalities

The SIMI project has three working modalities — heavy, medium, and light — with varying degrees of DADO, SIMI, and NGO staff involvement. The light districts have only one SIMI team staff member who supports the DADO Service Center staff in implementing the activities. Districts where previous projects worked have been integrated into SIMI as medium districts with NGO implementation.

The distribution of SIMI's 18 districts (excluding tea) is followed by the number of VDCs/municipalities (in parentheses) in which SIMI worked:

- Heavy: Banke (11), Kaski (18), Lalitpur (15)
- Medium: Bardiya (17), Surkhet (16), Kailali (15), Palpa (18), Kapilvastu (24), Rupandehi (22), Syangja (42)
- Light: Dadeldhura (7), Nawalparasi (17), Gulmi (17), Arghakhanchi (19), Tanahu (18), Lamjung (12), Kavre (10)
- Super-light: Doti (4)

2.4 OVC component

The Other/Orphans Vulnerable Children component within SIMI began in 2006 to improve health, nutritional, and educational status of vulnerable children under the age of five. It includes a nutrition and hygiene education program conducted through daily participatory learning and action (PLA) sessions and weekly group discussion (GD) sessions.

It builds the capacity of local private-sector health care providers and provides trainings on proper drug use. It collaborates with local media and social marketing campaigns.

SIMI OVC is being implemented as a component of the existing SIMI interventions in seven districts: Banke, Bardiya, Surkhet, Kapilvastu, Palpa, and Syangja.

3. EVALUATION OBJECTIVES AND METHODOLOGY

The purpose of studying and evaluating the processes and results of the SIMI project was to assist project stakeholders in better understanding how the activities and approaches promoted by the project can be replicated and improved, and how they can contribute to economic development and poverty reduction.

The team reviewed in-house documents of the project, specifically for factors that could have an effect on the achievement, or not, of the objectives of its activities. It employed qualitative techniques to gather information and perspectives relevant to the objectives of the evaluation. These included on-site observation, semi-structured interviews, focus-group discussions, and, as much as time permitted, in-depth interviews.

The consultants developed a semi-structured interview guide and checklist for each type of respondent, covering a range of topics. The team acquired information from the following categories of respondents:

- Farmers supported by SIMI
- MPC members at various levels
- Private-sector traders and suppliers
- Government officials and staff
- SIMI and NGO staff members

Focus-group discussions were conducted with specific groups of individuals, such as four local NGO partners, to analyze the internal strengths and weaknesses (challenges) of the project and the external opportunities and threats to a continuation of the activities. The group then discussed the factors that influenced the outcomes of the activities.

The on-site visits documented the experiences, opinions, and suggestions of individuals and groups in eight districts. Meetings and interactions were conducted with representatives of the various stakeholders and partners. The districts and activity sites were selected by the SIMI team on the basis of accessibility and relevance as an illustration of SIMI activities. The team visited the following area offices, districts, and activities.

Area	District Visited	Activities Observed
Pokhara	Tanahu (light district)	MIT and vegetable production
	Syangja	CC, IPM training, MIT groups
	Palpa	RF, coffee, OVC class
	Kaski	staff SWOT, GoN, research
Lalitpur		vegetable, action research
Nepalganj	Banke	NTFP DU, fish, staff SWOT, GoN
	Bardiya	cooperative, leased land, OVC PLA

The team analyzed the interviews, discussions, and on-site observations in order to identify significant factors. However, the accuracy of the study may be limited by the following:

- the relatively small sample size of the participants surveyed;
- the selection of observation sites by project managers rather than random selection;
- personal biases and perceptions of the consultants, respondents, and the SIMI team, especially on issues such as gender, social inclusion, and cultural norms;

- the attendance of high-level SIMI project staff at all interviews, discussions, etc.;
- inconsistencies in semi-structured interviews and focus-group discussions, which were also an opportunity to pursue new information; and
- the short time frame for the completion of the study, which included a strike and closure that prevented visits to districts in the Butwal area.

4. OVERALL OBSERVATIONS AND FACTORS

SIMI has made an impressive demonstration of a model of an agricultural program that can contribute to reducing rural poverty in Nepal through the value chain approach and strong collaboration with a number of stakeholders.

The SIMI program is a complete package of inputs, production, and marketing. The package contains MIT and seed in the form of inputs; training and demonstration on cultivation practices as production; and development of collection centers, marketing committees, and market information under the marketing component. This value chain approach has proven success in SIMI areas.

SIMI's many achievements included a 50% increase in rural income for poor farmers and a model for program management with public-private partnerships and collaboration. As the interventions evolved, SIMI conducted action research to solve various problems associated with production and the technologies involved.

Through increased agricultural production, SIMI has offered a means to raise incomes in rural areas, increase household production, and improve the livelihoods of rural families. Many of these families may be landless, marginal farmers, tenants, upland dwellers, ethnic minorities and scheduled castes, or internally displaced.

On the basis of focus-group discussions and meetings with stakeholders and farmers, the study team made the following observations of the SIMI project and its activities.

4.1 Emphasis on Value Chain Approach

SIMI's value chain approach included all aspects, from the supply of inputs to the market outputs. The planning was based on a sub-sector analysis and business development approach that promoted partnerships with private-sector actors.

4. At the **input level**, building the capacity of service providers has meant that there are now agro-vets, tradesmen, local resource persons (LRPs), private practitioners, and dealers and suppliers of the MIT equipment. Nurseries now provide seedlings to the farmers on a long-term basis.
5. At the **production level**, SIMI provided technical capacity building to farmers. A noteworthy aspect of the training was that it was conducted in the settlement of the participants as on-the-spot training. Farmers commented that the technical training had enabled them to increase their production levels.
6. At the **output level**, SIMI developed the capacity of farmers and established or developed MPCs, CCs, bazaars, apex bodies, and cooperatives for marketing of production. These market institutions helped create jobs at the local level.

   It should be noted that these infrastructures were developed by leveraging the resources from local stakeholders, thereby increasing ownership on the part of stakeholders, which could be a mechanism to promote sustainability.

4.2 Management of Project

One of the most significant strengths of SIMI was its collaborative working style, which created **linkages and coordination** with a wide variety of GoN, local-government, NGO, and private-sector actors.

This was possible because the SIMI team was a multidisciplinary consortium of six different organizations, each with specific expertise in different sectors. Mobilizing the expertise of these different organizations in a coordinated/united way brought about synergistic effects.

The partners formed a "SIMI Team" with partner TORs, annual reviews, and work plans. The management recruited specialist professional staff in each field. Whether they were employees of IDE or Winrock or a national NGO, they regarded themselves as members of the SIMI team, which allowed for greater coordination.

At the **central level**, SIMI established a Project Advisory Committee (PAC) to oversee the implementation of the project. It was chaired by the Secretary of the MOAC and had representatives from government, partner NGOs, staff, and USAID. The PAC engaged diverse stakeholders, such as MOAC and MLD, so that they could work together. Through MoUs, SIMI completed a number of activities ranging from the development of a hybrid tomato, to construction of MUSs, to the supply of computers for collection centers.

SIMI contributed to an improved policy environment by working with its government partners to change policies relating to

- tax on vegetables on the Nepal-India border;
- price information broadcasting on the radio;
- provisions for DADOs to allocate 50% of their funds to support MITs in SIMI districts; and
- internal and intra district receipts tax exclusion (act passed).

An exclusion for VAT on agriculture inputs is in the process of being implemented. The GoN replicated and expanded the SIMI approach to more districts, from seven to 28. As well, SIMI instigated a high-level permanent committee to address issues related to the Job in Agriculture Project.

When DADOs were facing problems in launching their smallholder irrigation program due to the lack of technicians, SIMI provided, in coordination with CTEVT, four training sessions on Micro-irrigation Technology Training for government staff (JT/JTA) for 89 persons.

At the **district level**, SIMI worked to bring together the line agencies with technical capacity and the local governments, DDCs, and VDCs, which have budget allocations. SIMI successfully leveraged substantial funds for its activities from these agencies. Through coordination between MLD and MOAC on the PAC, SIMI catalyzed the development of guidelines for DDC and VDC investment in agriculture activities including MITs, MUSs, and collection centers.

4.3 Time Frame

The SIMI project has had short time frames throughout its implementation. It started three years of implementation in 2003, which were extended for one year in 2006, and then for another two until September 2009.

Several field staff commented that the uncertainties of the extension periods, with higher targets, made it difficult to motivate farmers to participate and often limited the provision of a complete training and follow-up to farmers who had more recently acquired MITs. The field staff had recently been mobilizing farmers to reach the last MIT targets, but said that the farmers were less enthusiastic knowing that they would not be able to get the full follow-up support package. Various respondents suggested that a time frame of three to five years is necessary for follow-up in order to strengthen the groups and build the capacity of farmers for sustainability.

"The package is for two years, but to meet the indicators, we are still forming more groups. However, they will only get 6−9 months of support and not the full package. People in the groups are complaining to us." — SIMI staff

4.4 Coverage

In this final year and phase, SIMI is being implemented in 302 VDCs and 10 municipalities of 18 districts. The number of working districts of SIMI increased with the incorporation of activities from previous USAID projects.

Several respondents commented on the low coverage within VDCs and wards. The following data, as well as some participants in SWOT sessions, indicate that project coverage is about 10–15% of the VDCs in a district and about three of nine wards in a VDC. The overall average number of households per VDC is 198. The reasons for this are limits to project budgets, and SIMI's approach of working with farmers close to the roads for market accessibility.

SIMI Project Coverage

	Districts	VDCs	Municipalities
Nepalganj area office	**6**	**70**	**3**
Butwal area office	**6**	**117**	**2**
Pokhara area office	**4**	**90**	**4**
Lalitpur area office	**2**	**25**	**1**
Tea	**5**		
Total	**23**	**302**	**10**
OVC Coverage – groups were formed from among SIMI members			
Nepalganj office	**3**	**28**	**2**
Butwal area office	**4**	**28**	**1**
Total	**7**	**56**	**3**

Source: SIMI

The **OVC project** implemented as a component of SIMI covered seven districts where SIMI's main activities had been implemented. The NGO partners were instructed to form groups of women who were (1) illiterate, (2) had a child under five years of age, and (3) were already members of a SIMI group.

The field staff commented that this last criterion made finding participants more challenging and restricted the participation of women who were not SIMI group members and were sometimes the poorest community members. In Palpa, the NGO addressed this issue by allowing women who were not SIMI members to attend the classes, but without providing materials for them. NGO staff commented that there was demand for the program in VDCs and communities but that longer time for follow-up is needed.

"We have a target of 1,500 households and worked with 800 households for six months. The pneumonia cases are fewer. But our follow-up is weak because we have to start 800 new households — even though we won't be able to finish the year of support." — SIMI staff

4.5 Implementation Modalities

The **heavy** modality is led by DADO to determine pocket communities and has a full SIMI support team, which hires local NGOs for social mobilization. The NGO involvement allowed for the continuation of the project during the conflict. SIMI provides some overhead support to the DADOs and budgets to the NGOs.

The SWOT analysis identified the limited budget to NGOs as a constraint in providing for travel, snacks, activities, staff remuneration, and NGO overhead costs. The DADOs and NGOs can act as service providers after the closure of the project.

The **medium** modality is implemented by SIMI staff and local NGOs without the direct involvement of the line agencies.

The **light** modality involved direct DADO implementation for MIT distribution and vegetable production. Although this modality enabled SIMI to meet quantitative targets, the social mobilization by government staff appears to be weak and less inclusive of poor and marginalized people.

The time constraints of this evaluation did not allow for a thorough examination of the design of these modalities, which requires a more detailed study of their effectiveness and potential for sustainability.

4.6 Indicator Targets

SIMI had several indicator targets to monitor its outputs and impacts, especially for the installation of MIT and the income from the sale of agricultural production. It achieved 71%–190% of the quantitative targets and increased the average HH income of project beneficiaries by 160% of the target of US$184.

Its lowest level of achievement was job creation in the value chain, perhaps because not all collection centers have hired local staff at the time of this report. The highest-percentage achievement was strengthening private-sector service providers, as SIMI surpassed its target of developing 19 instead of just 10.

As of April 2009, SIMI had facilitated micro-irrigation for over 63,000 households and provided technical assistance through 3,294 farmer groups in 302 VDCs of 18 districts.

4.7 Monitoring

Monitoring and follow-up is built into the project as one of the steps in the agricultural value chain approach. The documents provided by SIMI did include two study reports on marketing and adoption of drip irrigation. The OVC component had an impact study and three reports on intake and end-line surveys. Inadequate follow-up and monitoring has been reported in the earlier studies, including the Drip Irrigation Adoption Study, 2007.

SIMI's monitoring activities appear to consist mostly of tracking performance indicators for outputs in terms of numbers of MITs installed and farmers trained. It appeared to have very strong monitoring of agriculture production and income from marketing agricultural production.

However, the lack of M&E software systems at the regional and district levels was mentioned in two of the SWOT analysis groups. The monitoring of processes such as social mobilization, micro-credit, and revolving funds did not appear to consider the qualitative outcomes of the activities: for instance, how the farmers got water to drip-irrigation tanks, how revolving fund loans were repaid, how groups were functioning, or what else women farmers needed to market their production — an example being literacy.

4.8 Working in the Context of Conflict

From 1996 to 2006, an insurgency and counter-insurgency activities affected most districts of Nepal and the movement of people and materials. SIMI endeavored to be "conflict-resilient" by focusing on small farmers; providing tangible benefits such as MITs and agricultural and marketing support; and involving a diversity of community members.

During the conflict, SIMI technical assistance staff and NGOs worked to maintain communication and coordination, train farmers, install MITs, and deliver services. Generally, the responsiveness of the project to the needs of the community meant that the local farmers defended it.

5. SPECIFIC FINDINGS AND FACTORS AFFECTING ACHIEVEMENTS

5.1 Benefits for Farmers

On all production fronts, SIMI staff and partners provided farmers with skills training and close technical supervision. SIMI provided technical, social, and marketing training to develop LRPs, who also practise the technologies. Farmers were well linked with supply and marketing systems, enabling them to get good-quality seeds and to sell products at competitive prices.

Participating farmers said that they were more aware of their rights and duties, did not have to go outside their local area in search of employment, sent children to better schools or for higher education, and have added household utilities through income generated from SIMI support.

Agricultural and financial impacts: Increased knowledge and skills on commercial production, increased cropping intensity, increased production and increased income were the major outcomes of the SIMI project that almost all farmers mentioned. The production of vegetables was a good source of income generation and nutrition through household consumption. Farmers were linked to supplies and had quick returns from the production and sale of vegetables.

With increased awareness of improved agriculture technologies, many farmers had increased their cropping intensity by growing several crops in a year for increased income. Several farmers mentioned the access to markets through collection centers for selling production. They appreciated the close technical support provided by SIMI staff.

However, when asked about difficulties, almost every farmer, except for those connected to a MUS, mentioned water supply. Some women said they carried water from sources 15 minutes to two hours away. As well, the one year of support was not sufficient for poor farmers. They also mentioned pests and diseases on crops and a lack of shade for coffee as factors affecting the quantity and quality of products.

Some farmers mentioned that they would like a diversification of crops, as SIMI only promoted one product in most communities — except for promoting vegetables on the banks of fish ponds.

Social impacts ranged from raised awareness to institutional development of collection centers and cooperatives where farmers learned to work cooperatively. Women, Dalits, Janajatis, and other marginalized people were included in groups or had separate groups.

Changes in gender relations were often due to women having access to money through SIMI activities. Women gained confidence and started educating their children and participating in development activities. Many women gained the ability to participate in meetings and voice their concerns.

Changes were more evident in districts where SIMI started early in its implementation and the group has had several years of follow-up. However, the social impacts were perhaps hindered by the lack of an overall gender strategy and of the consciousness it would have imparted to the management and professional cadre.

Technical impacts: SIMI promoted micro-irrigation technology — mainly drip irrigation in the hills and treadle pumps in the Terai — that was suitable for irrigating a small area. The drip is good for about 30 square meters, which accommodates 80 tomato plants at a 60-cm distance from each other. The farmers said that they have earned on average about NRs 100/plant from

tomatoes in a season of three to four months when planted under plastic houses. In two seasons within a year, a farmer can earn around NRs 15,000. This technology is therefore suitable for small farmers.

Those individuals trained as lead farmers replied that they had training that built their technical and agricultural skills and increased their ability to provide advice to neighbors, to demonstrate improved agricultural techniques, and to request services from line agencies and other service providers. Technical training for suppliers allowed them to install MITs effectively and efficiently. The agricultural training developed individuals as lead farmers who can continuously advise neighboring farmers.

Impacts in Other SIMI Sub-sector Activities:

Specialty coffee had an intensive program to improve quality through training and monitoring at pulping stations. SIMI supported an internal control system for smallholders which enabled nearly 1,000 smallholders to be organically certified. It has also developed market linkages and supported the coffee alliance to address issues of the sector and coordinate with government.

Orthodox tea: SIMI has supported the implementation of the Code of Conduct (CoC) that certifies social and environmental responsibility and quality manufacturing to promote international branding of Nepal tea. It also developed linkages for the U.S. Market; IPM packages for tea; and a Nepal clonal tea variety.

Fisheries: SIMI continued promoting the Ujyalo project smallholder fisheries model with a smaller-size pond for a household, vegetable production, and a treadle pump in partnership with GoN, which invested in 100 fish ponds and recognized the model.

Goats: SIMI developed a public-private partnership model that includes investment in dipping ponds, social mobilization, and local goat collection centers with queues for selling goats so that all farmers have a chance to sell their livestock and receive prices based on the weight of the animal.

Essential Oils: After BDS-MaPS closed, SIMI took on providing technical and social mobilization support that has enabled the successful establishment of seven closed-boiler-based distillation enterprises and over 70 direct-fired units. It provided training programs in essential oil production and processing for farmers, enterprises, government, and development organizations. SIMI also facilitated some linkages to international and national markets and between agriculture and forestry stakeholders. The distillation units added value to plant crops such as mint and chamomile and created some employment.

5.2 Micro-irrigation Technology

> "The farmers have the knowledge and skills, but they are having problems with water, especially if there is another year like this." — DADO staff

SIMI promoted several different micro-irrigation technologies (MITs), including treadle pumps, drip systems, efficient micro-sprinklers, multiple-use water systems, diesel and electric pumps (in Terai), and low-cost water storage technologies by insuring their quality. Many of these water-related technologies are suitable for smallholder farmers, providing the opportunity to irrigate a small plot with a small amount of water.

These technologies are easy to install and operate, save time, and provide more income even from a small plot of less than 100 square meters. A large number of the SIMI project's target households have successfully used these technologies.

Widespread use of the irrigation technologies was hindered by limited access to water; the high cost of technologies for very small and poor farmers; limited government budgets for providing a subsidy to every small farmer interested in installing the technologies; low-quality materials; and sometimes the unavailability of spare parts in local markets.

SIMI promoted these technologies by using a supply chain approach, providing training to manufacturers, assemblers, dealers, and users, and linking them with farmers and each other. These private-sector actors were developed with the assumption that they would provide installation as well as repair and maintenance services after the project is terminated. Although this sounds like a good strategy, we agree with previous findings that this expectation might not materialize because the volume of transactions would be too small to sustain the private-sector actors.

SIMI provided a 45-day MIT training to agricultural JTs/JTAs in the project districts, and GoN authorized them to design irrigation schemes within a cost limit of NRs 100,000. This has proven to be good technical assistance for the district concerned. However, when the trained staff are transferred to another district, gaps are left in the project districts.

5.3 Multiple-use Water Systems (MUSs)

The drought in the winter of 2008–09 created an especially high demand for MUSs in order to meet the multiple needs of communities, including drinking water and water for MIT. SIMI did not have any hardware funds to pay for the construction costs, but the project successfully leveraged funds from a variety of sources to construct 56 low-cost MUS systems, benefitting just over 1,300 households.

Factors affecting the implementation of MUSs included that they come under different government departments — drinking water and irrigation — making the coordination more complicated. Farmers reported that the MUS provided multiple benefits, although several respondents noted that the plastic in the reservoir ponds was easily damaged.

5.4 Production

Off-season vegetables: The MIT technology is linked to the promotion of plastic houses for production of off-season vegetables. The plastic houses regulate temperatures and protect crops from hail — a common natural disaster in the project sites in the hills. In Dhikurpokhari (in Kaski) and Dhorphirdi (in Tanahun), farmers used plastic-house technologies extensively to produce off-season vegetables. They earned about NRs 100 per tomato plant in one season while cultivating under plastic houses together with the use of drip irrigation.

The plastic house is meant for 80 plants, but we observed that many farmers had fewer plants due to a shortage of suitable land even of this small size. Farmers reported that the plastic they used lasted only for one season and thus was a costly technology for them.

Fish farming: In addition to vegetables, farmers also cultivated fish, especially in the Terai. Fish-farming activities have raised the average annual income of households by about NRs 15,000 to 20,000 from a small pond with 200 fingerlings and from cultivating vegetables along the dike of the pond. In Pahadipur Village in Naubasta, Banke, fish farming was initiated during the Ujyalo project. SIMI continued support after Ujyalo ended in 2007.

Supporters of different stakeholders in fish farming included RRN/DFID, FORWARD/Plan, and NEWA in close coordination with local NGO SDF. This integrated fish/vegetable technology was useful not only for earning income from the sale but also for adding protein and minerals to family diets, thereby improving their nutritional status.

In one fish-raising community, farmers complained about problems from snakes eating the fish, and frequent flooding of the fish ponds constructed in a swampy area.

We also observed some NGO partners bringing financial and material resources to the farmers from different organizations rather than building the capacity of farmers to have their own direct access to these resource-providing agencies.

Essential oil extraction: Since 2007, SIMI's support has expanded from 14 to 77 distillation units (DUs), initiated with support from BDS-MaPS (2003–2006). Cultivation of chamomile, mint, citronella, and lemongrasses on private lands was initiated in 2003. The quality of essential oil produced has met international standards, so some of the production goes to international markets. A total of 263 households are involved in the collection of wild herbs from forests using sustainable harvesting practices. They collected 47.5 tons from October 2008 to March 2009, for an income generation of NRs 22, 97,500.

This high-potential enterprise can be expanded and strengthened in future programs by building the capacity of owner members, cultivators, collectors, and technicians to identify appropriate NTFPs, to cultivate, protect, collect, and harvest plants, and to extract oil. In addition to production-related issues, market-related issues should be addressed, including price information from various sources; establishing viable linkages with export companies; simplifying the export processes; and solving cross-border issues. The quality of essential oil is lower than market standards, with lower active ingredients, and reprocessing is done in India.

Support for goat raising: SIMI continued a public-private partnership model from Ujalyo that invests in dipping ponds, social mobilization, and local goat collection centers.

5.5 Marketing

SIMI's value chain approach essentially involves marketing as one of its major components. Producers supported by SIMI sell their products through a collection center managed by the Marketing and Planning Committee (MPC). The MPC contacts traders and negotiates the price. Traders purchase the collected vegetables on a wholesale basis and transport them to the markets.

In the Terai, SIMI worked with existing *haat* bazaars to develop them as collection centers for vegetables and other commodities. In addition, it established apex MPCs located in district capitals to serve as wholesale collection centers and lobbying and advocacy bodies for the network of local MPCs operating throughout a district.

In cases of exportable commodities such as tea, coffee, and essential oils, linkages were established with national and international trading companies. SIMI has been supporting producer associations in coffee districts and at the national level. It also supported the process for organic coffee certification.

The marketing component faced several challenges. Our interaction with some concerned stakeholders revealed that all producers' groups were not sending their production to the collection centers due to the distances involved.

Though some collection centers provided incentives for graded products, many farmers are not yet grading their produce. There are examples of strong MPCs (e.g. in Nepalgunj, Palpa, Syangja, and Kaski), in which farmer members have developed the bargaining capacity to obtain higher prices for their produce. However, the capacity of many MPCs and farmers is yet to be developed. We noted that producers in Kohalpur, especially women, had difficulty calculating the cost of their sales. These women actively requested literacy classes to improve their skills.

One information center established with SIMI facilitation had obtained support from the High Level Information Commission. However, the computer and fax machine had remained idle for six months, waiting for government support for repair. Farmers could therefore not get price information during this time. It would be better if SIMI supported private cybercafés in providing market information on agricultural products.

Some collection centers have become cooperatives as well. However, not all SIMI farmers are members of the cooperatives, because the cost of purchasing a share is too costly. Some outputs could not go to India due to tight quarantine processes.

5.6 Social Mobilization

NGOs working with SIMI in the districts successfully carried out the social marketing of MITs and mobilized the communities to form farmer groups. Social mobilization was also used to form groups where they did not pre-exist. An estimated 40% of SIMI groups were formed through the project. The availability of tangible benefits, especially when subsidized by the line agencies, expedited the social mobilization.

However, we observed that a couple of the men's groups were no longer meeting regularly because several members had gone away for employment. The wives were continuing to meet in their groups formed through OVC.

A lesson learned in several other programs is that NGOs have better skills and aptitudes for social mobilization than do government staff. SIMI followed this model in the heavy and medium districts, but not in light districts, where the GoN staff did both technical and social interventions.

Several respondents commented on the area to be covered by each social mobilizer — often six to eight VDCs — and the relative lack of budget to support travel and basic expenses. Several comparable programs endeavor to have one social mobilization staff person for every one or two VDCs.

Social mobilizers often had to address questions from farmers about technical aspects of the activities. Some wished they had had more technical capacity building.

An emphasis of SIMI was inclusion of women and excluded groups as beneficiaries; as of December 2008, 63% of participants were women. Several field staff and beneficiaries advised that having more women social mobilizers would encourage more participation by women. As noted in the 2008 Performance Report, promoting gender equality is a "lengthy process that cannot be completed in the relative short duration of the program"; however, development of a gender strategy, as well as greater awareness building among the staff, would be a catalyst.

5.7 Pro-poor Mechanisms and Social Inclusion

SIMI incorporated several activities to enable poor households to participate. These included revolving funds to make loans available, and arrangements for leased land for families with little or no land. Almost all the groups visited had received a subsidy from the DADO for 50–100% of the cost of the MIT, and in fact, SIMI has facilitated a provision that 50% of the district small-irrigation funds can be used for MIT subsidies.

However, our limited field visits suggested that the participation of the poor may be hindered by several factors. First, they cannot regularly attend meetings; the NRs 1,000 shares in cooperatives formed through SIMI are costly for them; and they often do not participate in new activities because they must avoid risk until they see the performance of the technology. The

SWOT analysis also mentioned that there was a lack of coordination between SIMI and existing cooperatives, which could have provided extra support for the poor.

Revolving funds: It was very commendable that SIMI took the initiative to leverage funds from sources as varied as DDCs/VDCs and the Yahoo employees' fund to be able to provide revolving funds to groups of poor women.

Although SIMI reported a 100% repayment rate for the revolving fund loans to the poor, it seems that the qualitative outcomes were not monitored carefully. While the women greatly appreciated having funds available for loans, the details of repayment periods, installment amounts, and sources of repayment were questionable in three of three revolving fund groups visited.

When the team asked the group members ***how*** they paid back the loan within four or six months, several women responded that they had spent income from selling vegetables on daily expenses and did not have enough money on hand for the one large repayment installment. They had to ask for money from their husbands or take out loans from their micro-credit groups or local moneylenders. In Palpa, the three small groups had split the fund in three so that each group had a smaller fund immediately and did not have the tight deadline for repayment. In most programs, revolving funds "revolve" among the members of a group or cooperative. The SIMI model has the fund revolve among three groups for six months each in order to have greater amounts available.

Leased land: The study team met a couple of groups of Dalits who were making impressive incomes producing vegetables on leased land facilitated by SIMI. One Dalit woman was earning NRs 35,000 a season in this way. However, the team also recorded some "elite capture" where 20 of 22 group members owned more than the "smallholder" specification of 0.5 ha. Some households in other sites were obviously not the "poorest of the poor" whom the SIMI management repetitively said they support. Elite capture was also a concern mentioned by the MLD representative at the PAC meeting attended by the team.

> "Although SIMI intended the agriculture work to reach the poorest, it was difficult because the Dalits lack land for agriculture and they are more accustomed to working in their traditional trades."

5.8 OVC Component

The Other/Orphans Vulnerable Children component within SIMI worked with local NGOs to train FCHVs and health workers and establish women's groups that would meet weekly for health education classes. The women in the sites visited were enthusiastic and knowledgeable about the health issues communicated. They said that their children were much healthier than before. The groups were continuing to meet for s/c and discussions. There was a problem with the criteria for group members, which is discussed in the coverage section. A factor in the achievements of OVC was its partnerships with local NGOs already working with women's issues, empowerment, and health.

6. DISCUSSION AND ANALYSIS OF SUSTAINABILITY, REPLICABILITY, SUITABILITY, AND EFFICIENCY

6.1 Sustainability of the Activities Completed under the Program

The main factor in the sustainability of the program activities will be whether the farmers continue the economic activities because they earn a worthwhile income. According to SIMI information, 86% of farmers are continuing to produce and market vegetables.

The private-sector suppliers and traders will continue these economic activities with the farmers so long as they have a viable business. A threat to the private suppliers could arise if an outside agency started providing too many MIT units free of cost from outside sources.

SIMI has developed exit strategies for sustainability of the value chain and public-private partnership. Several factors that will affect the sustainability of the activities come under three broad categories:

- government capacity to sustain program technically through line agencies (DADO, DLSO, DCPA, WDO, DDC);
- institutional sustainability; and
- financial sustainability for farmers.

Government capacity for sustainability: Coordination with government stakeholders at regional and district levels has been a key element in SIMI's exit strategy. The line agencies have received training to provide value chain services, and the capacity of the local institutions to demand and seek support from the relevant line agencies such as DADOs, DLSOs, and VDCs/DDCs has been a key activity. However, it is difficult to predict how responsive the line agencies will be once the SIMI management is not present to catalyze the linkages and once "new" government officials are transferred to these posts.

Institutional sustainability: A key element of SIMI's value chain approach has been developing local service providers for inputs, and collections centers for market outputs. The members of collection centers have collected funds for their management.

SIMI has promoted the registration of local institutions such as producer groups and MPCs as cooperatives. It has also started to form apex bodies and cooperatives and to strengthen their linkages with service providers and regional and district markets.

A factor that could affect sustainability is the technical and managerial capacity of many farmers and the development of vertical federations to link collection centers with bigger organizations.

Financial sustainability: At the micro-level, the financial capability of farmers to continue the activities with their own resources needs further consideration. For some of the poorest farmers, the income just meets their daily needs, and the technology is costly to replace and maintain. They have limited access to other financial institutions that can continue the services to the farmers, such as cooperatives, because they cannot afford the shares.

6.2 Replication of SIMI's Approach and Activities by the Government of Nepal and Other Agencies

The reasons for replication of SIMI programs, as per the concerned stakeholders with whom we interacted, included:

- the suitability of the technology for small plots;

- evidence of good income from the production by the program farmers;
- favorable policy for expansion of program, such as subsidy from the government;
- complete package of agricultural value chain;
- matching with the government's strategy for reducing poverty through agricultural commercialization; and
- adequate budget available with DADOs and other agencies to provide subsidies.

Discussions were held in groups as well as individually with related government agencies and other stakeholders in Tanahun, Palpa, Kaski, Banke, Lalitpur, and Kathmandu. These included the Regional Directorate of Agriculture, Western Development Region; DADO-Kaski; DADO-Banke; DLSO-Banke; DFO-Banke; LDO-Banke; DADO-Lalitpur; dealers and assemblers of drip irrigation and treadle pumps in Palpa, Kaski, and Banke; manufacturers of drip irrigation in Lalitpur; MOAC; DOA; DOLS; DOI; NARC; and ex-secretaries and DGs of DOA who during their tenure were involved in project activities.

Discussion with the stakeholders revealed that the SIMI model has been replicated in many areas. Some examples included:

- drip irrigation for vegetable production under plastic houses, and market management by farmer groups in Pumdi-Bhumdi; integrated drip, vegetable production, and selling of vegetables through collection centers by the Naya Kiran Farmer Group in Bhalam; and the establishment of several farmer groups in Kahun through DADO-Kaski;
- drip irrigation, vegetable production, and marketing through World Vision in Kaski; and
- linking drip irrigation with water ponds and the production and sale of vegetables in Kushma, Parbat district.

Influencing factors for government or other stakeholders to replicate the SIMI model were:

- The government has made a policy with a provision to allocate up to 50% of the funds appropriated for small irrigation under MOAC, to the promotion of MIT.
- DADOs used 50% of funds for the promotion of MIT at different subsidy rates. DADOs in Lalitpur provided almost 100% subsidy; in Kaski, up to 85%; in Tanahu, 50% — not only for SIMI areas but also for non-SIMI VDCs in the districts.

Complete package: The SIMI program is a complete package of inputs, production, and marketing. Recognizing the success of this package, DADOs have replicated this approach in non-SIMI VDCs in Kaski, Parbat, Tanahun, and other places, again at subsidized rates.

Other replications: The approach has also been replicated by another project of USAID, *Education for Income Generation*, executed by Winrock in the Mid-Western Development Region. The project has four components: literacy and life skills; vocational education and job creation; agriculture productivity and job creation; and scholarships for Dalits. The component for agriculture productivity and job creation has replicated the SIMI model, as it was tested, verified, and found successful in similar conditions by the same executive agency.

Asian Development Bank Nepal has also replicated the SIMI approach in its LEMI program in eastern Nepal. It is now considering designing another agricultural project with the SIMI approach. The reason that ADB is designing projects along the SIMI line is that the technology is appropriate for agricultural commercialization of small landholdings.

There is a spillover effect of the SIMI program in the vicinity of program sites. Evaluating the benefits obtained by SIMI farmers, non-SIMI farmers are buying MITs from private-sector service providers and installing them with the help of tradesmen trained through SIMI. They are also buying quality seeds, cultivating them, and bringing produce to collection centers.

Although there are some examples of replication of the SIMI model, replication in wider areas is not yet taking place. Reasons for the low replication rate include the high costs of MIT for very poor farmers. The technology costs about NRs 10,000, including a drip-irrigation set and a plastic house. If lower-quality plastic is used, the technology costs about NRs 5,000 to 6,000. The target of the technology is poor farmers, as it is suitable for small landholdings. The poor farmer, however, cannot afford to make an investment of this size.

6.3 Suitability of the Objectives and Activities of the Program

Target Population

SIMI's objectives and activities did contribute to the needs of the target population by increasing production and creating linkages to markets so that the target population could generate income.

USG Development Assistance Objectives

The project is suitable to the two strategic objectives of USAID under which it was supported.

SO1: In the first phase of SIMI, the goal of USAID support under SO1 was *Increased Sustainable Production and Sales of Forest and High-value Agricultural Products*. The activities of SIMI were completely in accordance with the objectives of SO1 because they did "promote the use of appropriate scale irrigation and water management technologies to extend the growing season for off-season production." As well, through the value chain approach, SIMI did implement "activities in rural enterprise development and business support services to encourage the growth of rural micro and small-scale enterprises for forest, farmer, and irrigation groups."

SO9: The extension phase of SIMI was mostly suitable to attain SO9 *Enhance Stability and Security, Agriculture Productivity Increased for Improved Livelihood (APIIL)*, which aimed to improve livelihoods in order to mitigate the effects of the conflict.

However, given SO9's goal of mitigating the conflict, the coverage of the activities could have considered whether concentrating assistance and benefits into one small pocket area might contribute to resentment and conflict with neighboring communities. Unfortunately, the study team did not have sufficient time to meet with farmers from surrounding areas to discuss their views. More importantly, the long-term implications of consolidating resources in certain pockets might be counterproductive to the peace process if resources are pulled from the support of activities in other areas.

Consistency with Government Policy

SIMI was a very suitable project for implementation under GoN's Tenth Five Year Plan and current Three Year Interim Plan, which includes:

1. "extensive use of technology to raise the productivity per unit and be competitive in the production aspect";
2. "produce and commercialize the goods and high value crops based on domestic and external markets"; and
3. "make production, processing and market system sustainable by increasing the participation of private sectors, cooperatives, non-governmental organizations and women in the possible areas."

6.4 Efficiency of Activities and Implementation

In this study, cost-effectiveness is examined in terms of benefit-cost ratios; costs per household; staff arrangement patterns; and the distribution of expenses between program and administration, and central and field.

The project as a whole has spent about US$104 per annum per household and has generated US$184, with a benefit-cost ratio of 1.77. However, this does not cover the costs leveraged from other sources. The return on investment from USAID is about 4:1.

Benefit-cost Ratio and Return on Investment of SIMI Project.

	2003–08 All	**2003–08 Vegetable**	**2003–09 (March) All**
Average increase in income per HH per year	$178	$178	$184
Total HHs	61,850	58,485	70,460
Total SIMI expenditures	$6,614,278	$6,374,033	$7,333,196
Benefit-cost ratio	**1.67**	**1.63**	**1.77**
Cost per HH	106.94	108.99	104.08
Total increase in income	$25,920,000	$25,312,000	$28,613,164
ROI	**$3.9**	**$4.0**	**$3.9**

Source: SIMI

To assess the cost-effectiveness of the SIMI project, we compared the cost per household and BCR with a similar project, "Improving Livelihood Security of Socially-excluded Communities in Nepal" (ILISCON), funded by the EU and executed by the Practical Action in West, Mid-West and Far-west Development Region of Nepal from 2006 to 2009. The ILISCON project spent US$143 (Euro 118) and generated US$195 per household, with a benefit-cost ratio of 1.36. This indicates that the SIMI project is less costly and has a greater BCR than the ILISCON project.

It is appropriate that over 96% of the project budget was spent on vegetable production activities involving almost 95% of the population of the target households during 2003–2008.

The BCR of 1.63 for vegetable production is slightly lower than the BCR of 1.67 for project activities as a whole. The other enterprises undertaken by the project, which benefited 3,365 households (5%), would have a higher BCR when analyzed separately.

These other economic activities include processing and marketing of NTFPs, raising small livestock, and fish farming. They are equally important enterprises, as their BCR can be presumed to be even higher than for vegetables. This indicates that although spending on vegetable production is an attractive venture, future investment in other enterprises could be made at a larger scale, as they offer somewhat higher increases in income.

The project was operated in an efficient way at the field level by using different partnership modalities and leveraging resources from stakeholders related to SIMI activities. For example, SIMI initiated the construction of almost every collection center with resources from DADO and other stakeholders. It provided drip irrigation and treadle pumps to farmers with subsidies from DADO budgets. It also brought resources from DFO for NTFP processing, from DLSO for goat raising, from World View International for MUS construction, etc.

To provide services from specialist staff, SIMI leveraged some staff costs from other projects of Winrock and IDE, thus also reducing its own costs.

The project's central office involves two international organizations, Winrock and IDE, and big national organizations, such as CEAPRED, SAPROSC, AEC, and ANSAB. The central-level

cost is almost 40%, leaving only 60% of the budget for the field level. The project spends about one third of its budget on administration.

To further reduce administrative costs and allocate more funds to field activities, USAID could consider reducing the number of large national organizations involved. Using one skilled NGO to facilitate work through more CBOs, rather than involving many large NGOs, would perhaps be a better way of reducing administrative costs. This would also eventually lead to local capacity building and greater sustainability of the approach.

7. CONCLUSIONS: LESSONS LEARNED AND RECOMMENDATIONS

SIMI achieved substantial impacts by providing software and leveraging funds from other sources. It used an effective program approach that:

- brings tangible benefits to farmers;
- integrates all components for increased income from agriculture; and
- establishes excellent coordination and linkages.

In the short time frame of this evaluation, we cannot offer definitive answers but we can raise some questions that will require considerable thought and planning:

- In the context of SO9, greater coverage might be required to enhance peace-building. SIMI's leveraging of funds for its communities did indeed bring greater benefits, but what about other communities without SIMI support and without access to the GoN funds that went to SIMI areas?
- Opportunities for future development are being presented by the growing need for sources of irrigation and drinking water. Can USAID provide some funds for hardware such as MUS?

Future programs will face challenges from outside limitations and threats, including:

- unsystematic provision of subsidies by other actors and agencies;
- loss of capacity when government staff are trained and then transferred;
- migration of young labor force for the advantage of outside employment;
- increased drought due to climate change; and
- inequitable distribution of program within and among communities.

7.1 Lessons Learned and Recommendations for the Future and the Proposed Agriculture Program of USAID

Building on the Strengths of SIMI (2003–2009)

Successful application of the value chain approach: SIMI's agriculture value chain approach has worked well in raising income from the production and sale of vegetables and other products. It built on the past achievements and experiences of projects undertaken by the lead agency and partner organizations. Establishing business relationships between farmers and service providers and the private sector led to greater sustainability and higher-quality services.

Synergetic achievements through coordination and linkages: Excellent linkages and coordination at the central and district levels proved that if several agencies work together they can create synergy for greater impacts. Implementing and institutionalizing interventions at the local level and in the private sector maximizes community and individual ownership of the project interventions. More was achieved with USAID funds by consolidating resources of other stakeholders to implement SIMI targets. The many MoUs between SIMI and its partners institutionalized the working relationships.

Cost-effective implementation through INGOs: The Winrock and IDE combination operated at an administrative overhead rate of about 18%, which is normal for most INGOs. This is an important consideration when deciding whether the implementing organization should be an INGO or a contracting firm.

Integrated management and staff: The SIMI staff consisted of several individuals from various organizations who worked together as a team. This was undoubtedly a factor in the achievement of so many impacts.

Flexibility to solve problems: The flexible terms of the Cooperative Agreement for SIMI meant that the primary partner had a relatively open environment in which to solve problems and develop linkages. It worked to find solutions to agricultural problems by conducting action research.

Implement strong coordination mechanisms from start of project: In a project with multiple stakeholders, provisions for coordination mechanisms are essential. These include Project Advisory Committees (PACs), regular meetings, workshops, and review missions.

Require mechanisms for transparency and accountability: The construction of "common" property structures, such as collection centers, requires transparency and accountability. SIMI staff report that they endeavored to be transparent with communities during these processes. Future programs could have requirements for public audits that would promote transparency and accountability among stakeholders and within communities to build trust and cooperation.

Build the capacity of the GoN to work as a facilitator: The strong linkages among stakeholders were due to the connections and working style of the SIMI staff. Future projects could benefit from capacity building of GoN staff members and institutions to function as facilitators and coordinators.

Lessons and Recommendations for Project Design

Clarify targeting of subsidies: The question of subsidies to farmers has both positive and negative aspects. On one side, it allowed some poor farmers to participate who otherwise might not have been able to afford the MITs. On the other side, many relatively well-off farmers also received subsidies for MITs when they could probably have afforded them anyway. Providing free materials creates a dependency syndrome and does not encourage individuals to develop entrepreneurship.

Budget allocations: A cost implication of using several larger organizations can be a resulting shortage of funds in field operations. The executing organization should ensure that smaller implementing organizations have sufficient funds for their field operations.

Consolidate coverage in VDCs: It may be advisable to reduce the number of VDCs where a new program is implemented, but to increase the coverage in the project VDCs. This would also make the work of field staff more efficient and reduce their travel time.

Examine how coverage might affect conflict: The coverage of SIMI activities was concentrated in specific pockets, which staff said was necessary for the collective marketing of the products, but which might also generate conflict with neighboring communities.

Promote more employment opportunities for landless youth: Employment- and self-employment-oriented skills training is necessary in areas containing very poor farmers with very small plots or none at all.

Include a phasing-out program with sufficient follow-up and capacity building: Staff and stakeholders recommended that future projects have intensive phasing-out strategies to ensure

that all services are delivered to the beneficiaries. This would mean that activities to meet quantitative targets would cease at a predetermined point so that there would be sufficient time for follow-up activities (three to five years).

Involve VDCs and DDCs as stakeholders: Several activities of SIMI, such as collection centers, received subsidies from the VDCs and DDCs. These bodies should be included as future stakeholders to ensure the most effective and appropriate implementation of specific components.

Monitor activities and materials delivered through linkages: Although SIMI did a remarkable job of leveraging funds and materials for a variety of hardware, sometimes it was not being used effectively. For instance, the information center in Palpa remained idle for six months with the expectation of getting free repair of the freely obtained computer and photocopier. It might also be the case that the hardware was too high-tech for the users. In this instance, radio and mobile phone text messages could be more effective and sustainable.

Include qualitative outcomes in monitoring: Several activities of SIMI succeeded in reaching quantitative targets but had a few questionable outcomes in terms of how the targets were achieved. Hence, it would be beneficial to include some qualitative monitoring of the outcomes in the M&E system.

Agricultural Production

Build on Strengths

Practical training: Farmers commented that the training provided by SIMI was practical and useful, especially because it was conducted in their settlements and fields. Future projects should continue the practical training and on-site mentoring that build the capacities of training participants.

Continue support to improve both agricultural production and marketing: As farmers improved their production, they realized the need for more advanced marketing of their production to significantly improve their livelihoods. This included the establishment of collection centers and the use of cooperative marketing.

Promote local service providers: Training for local individuals to become lead farmers allows for the sustainable availability of agricultural advice to farmers. Information about diversified crops and improved agricultural techniques was relayed to farmers through local lead farmers, whose own fields serve as demonstration plots.

Future Recommendations

Promote crops that are less perishable or can be stored: Several farmers commented that they had lost crops that could not be marketed immediately, due to weather, political disturbances, or low prices. The promotion of some crops that can be stored would reduce the potential losses incurred by the farmers.

Introduce provisions for crop insurance: As farmers start to use modern agricultural techniques, their investment in a crop increases, but hail, floods, or political unrest can damage or prevent the marketing of the crops. The farmers can encounter a heavy financial loss. Crop insurance would offset these risks.

Lessons and Recommendations for Social Mobilization

Strengthen social mobilization: The interaction of the community motivators with the target beneficiaries left many questions with the evaluators about its effectiveness beyond social

marketing for the installation of MITs. Some motivators used a variety of techniques, but others could have played a greater role if they had had more skills in facilitating wealth ranking and resource mapping of the community and of households in order to select appropriate target households. Social mobilization is a domain of NGOs that believe that the empowerment of people leads to overall development.

Target poor households and poor women: All Dalit and ethnic-group households are not necessarily the poorest people, and all women are not necessarily disempowered. Utilizing techniques such as a well-being ranking would better target the poorest and most marginalized households. Women from poor households are a proven effective target.

Provide teams of social mobilizers and women staff members to promote the participation of women and marginalized groups: While locals are more effective, especially in a conflict situation, local women may not have the skills for this employment. The hiring of women and members of marginalized groups as social mobilizers can increase the participation and empowerment of women in the groups.

Provide training and mentoring for social mobilization staff: It may be effective to have a social mobilization coordinator who mentors and supervises the local staff. In some communities, it may be necessary to provide pairs comprising both a woman and a man in order to mobilize community members. It may sometimes be necessary to hire women from outside the local VDC as social mobilizers. Provisions are necessary to ensure that the working conditions are appropriate for women staff members.

Revolving funds should have more flexibility: Provisions for revolving funds for each group over a longer time frame and for smaller repayment installments would also facilitate the repayment of loans without the need to take out other loans.

Lessons and Recommendations for Gender and Social Inclusion

Develop a clear gender strategy: A gender strategy should have indicators of how to work with women and how women will become empowered. Gender and social inclusions should be defined as a program component with a gender specialist.

Ensure clarity and shared objectives and the mandate of a gender specialist among stakeholders: In a complicated program such as SIMI, there needs to be clarity on the shared objectives in order to implement gender and social inclusion strategies. This requires that all partners respect the gender strategy. No matter how committed a gender person might be, s/he will have difficulty without the support and commitment of all levels of management and of all stakeholders.

Ensure venues to allow women to raise and address their own issues: Activities such as literacy classes or PLA allow women opportunities to become aware of their rights, build their skills and confidence, and raise and address their own issues, such as rights to assets and land for production.

7.2 Recommendations

In summary, the main recommendations of the study team are:

6. **Build on success:** Continue and strengthen the successful project design and components of SIMI that brought increased income to rural households, especially the value chain approach, capacity building, and strong linkages and coordination.

7. **Develop a longer-term time frame:** Develop a long-term program to be implemented in at least five-year phases so that its activities and outcomes can be followed up and consolidated in the rural areas.
8. **Invest in water:** Expand and support interventions to promote the availability and accessibility of water in the program and in surrounding communities. USAID could increase its investment in more systematic small-scale water development for drinking water and irrigation.
9. **Improve social components:** Revise, improve, and strengthen four components described in more detail above — social mobilization, gender and social inclusion, micro-credit, and monitoring of outcomes.
10. **Examine how coverage might affect conflict:** It might be more conflict-sensitive to provide a system of overall infrastructure support to communities, such as water systems, and then allow the community groups to decide among themselves, using a well-being ranking, which households should receive grants for IGAs.

A table summarizing the findings and recommendations follows.

Summary of Findings, Conclusions, and Recommendations

	Interventions		Findings	Conclusions	Recommendations
VCA	**Sub-sector analysis**		Created linkages to private sector for partnerships.	Overall value chain approach produces remarkable results for variety of products.	Continue value chain approach in various sub-sector and product areas in future programs.
	Related project activities		Strengthened marketing of coffee, tea, herbal oils — international market.		
Links	**Leveraging local government funds for project inputs**		Line agencies or DDCs/VDCs subsidized MITs and hardware; also replicated MITs and training but not social interventions.	Questions: Are there unused funds, or is there a concentration of inputs in project wards? What about other areas? Limited capacity of GoN to implement social components.	Consider carefully the concentration of funds in specific wards and VDCs for its conflict sensitivity. Support GoN to provide hardware and employ NGOs for social components.
Inputs	**MIT — entry point**		Increased production and income; but sometimes problems with maintenance.	MIT has potential but requires follow-up period to ensure farmers can maintain.	Ensure follow-up and continued availability of parts for MITs.
	Training of service providers		Service providers supporting project and non-project farmers	Training of local service providers makes activities more sustainable.	Continue emphasis on training local service providers.
	Social	**Leasehold land**	Access to land increased incomes and livelihoods of some landless people.	Innovations to lease land to poor can increase incomes in order to reduce poverty.	Continue and expand leasehold activities to support poor.
		Revolving funds	Capital is available, but problems with 3 of 3 groups: many took other loans to repay RF. Women's income used for daily expenses.	Design of RF had too short a time for repayment of one large installment. Revolving of fund among groups, rather than members, created problems.	Redesign RF mechanism — smaller funds that stay with groups, several smaller installments over longer time periods.
		OVC — literacy	Women learned health issues and improved health of children; also continued micro-credit activities.	Women's groups continue micro-credit more effectively to benefit families.	Expand activities such as PLA, literacy, and women's groups.
Production	**Training of farmers on IPM**		Farmers needed refresher and follow-up training to continue operation and maintenance of MITs.	Installation of MITs should be limited so that adequate time is left for follow-up.	Ensure that a follow-up period of two years follows installation of MITs; may require reducing targets for installation.
	Plastic houses		Expensive for poor farmers, as plastic must be replaced each year and low areas have pest problems.	Plastic houses work well for better-off farmers but are difficult for the poor. High cost of mitigating pests.	Provide revolving funds to purchase plastic,. Consider cost/benefit regarding pests.
Markets	**Marketing Planning Committees**		Great diversity in successful marketing by MPCs, especially if in remote area.	Leadership and linkages to markets are necessary.	Include leadership training in social component for MPCs, promote measures to transport production, promote non-perishable products.
	Apex bodies		Radios and mobile phones working well for market information. Computers and fax machines not maintained.	New technology is difficult to learn and maintain in rural situations.	Focus information access on radios and cellphones that farmers already have and maintain.

ANNEXES

Annex I: Statement of Work

USAID/Nepal Smallholder Irrigation Market Initiative (SIMI) Evaluation

I. Purpose and Objective:

The purpose of this statement of work is to outline the methodology for evaluating the performance of the USAID/Nepal Smallholder Irrigation Market Initiative (SIMI) implemented by Winrock International and its sub-partners. The objective of the evaluation is to document the challenges, achievements and sustainability of the SIMI activity in an effort to accurately capture lessons learned from implementation of the activity over the last five years.

II. Background:

USAID/Nepal's most recent agricultural assistance program, Smallholder Irrigation Market Initiative (SIMI), was developed to promote micro-irrigation for poor farmers. SIMI's direct goal was to help 70,000 poor families (over 400,000 people) to increase their incomes by more than 50%. Over a period of over five years, SIMI introduced farmers to micro-irrigation, improved agriculture input supply chains and enhanced marketing channels to enable poor farmers to take advantage of off-season high-value vegetable growing opportunities. SIMI also worked closely with the Government of Nepal and partner agencies to ensure the activities under the program had a sustainable impact.

Although Nepal has a high rate of rural poverty which has given rise to rural instability, SIMI was able to work in 18 underdeveloped districts in Nepal's Central, Mid-Western and Western development regions through strong community support. Activities funded under SIMI demonstrated that smallholders can have an advantage in labor intensive high-value agriculture if given access to appropriate inputs, services, and markets. The SIMI program will be ending on September 30, 2009.

III. Methodology

The team will conduct an evaluation of SIMI based on the questions outlined below. Utilizing the team's knowledge, experience and familiarity with development efforts in Nepal's agriculture sector, and in close coordination with the designated staff of USAID/Nepal's General Development Office (GDO), the team will meet with USAID staff, implementing partners, relevant Government of Nepal agencies, and other donor representatives, and will conduct field visits to select sites to meet the targeted beneficiaries.

For the evaluation of the SIMI program, the team is expected to address the following questions:
What were the major factors influencing the achievement or non- achievement of the objectives?
What real difference (economic, social) / downstream effect has the project activity made to the beneficiaries?
How sustainable are the activities completed under the program?

What influenced the Government of Nepal and other agencies to replicate this program in other areas?

What are the lessons learned from the implementation of this program for the future and proposed agriculture program of USAID?

How well suited were the objectives and activities of the program to the needs of the target poplation and to attaining USG overarching development assistance goals?

To the extent that the budget and timeframe allow, were the activities selected the most efficient and the program implemented in the most efficient way compared to alternatives?

IV. Deliverables

The evaluation team shall provide the following deliverables:

a. Within two days of arriving in Nepal to begin work, a brief outline of methodological approach for the evaluation, including proposed itinerary, schedule for interviews, and a detailed plan to address all logistical support needs.
b. A draft of the final report shall be submitted to the Mission for review. The Mission will provide written comments on the draft report to the team.
c. An out-brief for Mission personnel shall be conducted after the completion of the evaluation.
d. The final report, of not more than 30 pages in length, should contain an Executive Summary and should clearly identify the team's findings, responses to USAID comments, conclusions, and recommendations. The format of the report is flexible; however, the following sections are recommended: Table of Contents, Acronyms, Executive Summary, Background, Country Context, Evaluation Objectives and Methodology, Overall Observations, Findings (answers to questions in scope), Conclusions, and Recommendations.
   The final evaluation report will be submitted to Development Experience Clearing House in AID/W through PPD/USAID/Nepal and will be used as public document. The final evaluation report will be deliverable no later than two weeks after receipt of all comments from USAID/Nepal on the first draft. A total of 4 bound copies of the report should be delivered to USAID/Nepal, in addition to an electronic copy in Microsoft Word format.
e. Appendices should list all persons interviewed pursuant to the evaluation, along with their respective contact information.

V. Evaluation Criteria

Professional background in agriculture development work;

i) Previous experience in working on an evaluation team;
ii) Written and spoken fluency in English;
iii) Recent experience in, and background knowledge of, the South Asia Region (preferably Nepal);
iv) Proficiency with basic computer programs such as MS-Word and MS-Excel;
v) S/he will serve as the team leader and be responsible for leading the evaluation team and for completion and submission of the draft and final evaluation reports ; and
vi) The team leader should have a master's degree in the agricultural field, experience with agriculture projects in developing countries, and experience in the evaluation of development programs.

VI. Period of Performance

The anticipated start date for the evaluation team is o/a April 15, 2009. While exact time frame is to be determined in the detailed plan (deliverable A), estimated days are given here for illustrative purposes. The contract can not exceed 25 days without prior written approval by the Director of GDO. Up to three workdays may be required prior to commencing the field review for the collection and review of documents. The field evaluation and draft preparation of the evaluation report may require twelve working days, with an authorized six-day work week. An additional five working days or less may be required for the team leader to complete the final version of the evaluation report. The final report should be submitted within two weeks of receiving USAID/Nepal's comments on the draft report.

Days 1-3 – Team preparation; travel to Nepal (if necessary).
Days 4-20 – Initial meetings with Mission; submission of evaluation outline (table of contents); interviews, meetings, and field visits in Nepal; submission of draft SIMI evaluation report; out-brief for Mission staff.
Days 21-25 - (following receipt of comments from USAID) – Final report prepared and submitted.

VII. Other

A. Logistical Support

The Team Leader and locally-hired consultant will be responsible for arranging their own local transportation, communication and administrative support in Kathmandu. The team will select the districts and project sites to visit in consultation with USAID staff. USAID/Nepal staff will accompany the Team Leader and the locally-hired consultant on field visits in USAID/Nepal vehicles. While the two consultants will not incur cost for at the use of USAID vehicles during field visits, the two consultants will pay for air tickets, hotels and food. USAID/Nepal vehicles will not be available for use by team members for travel within Kathmandu. USAID/Nepal staff will also help to facilitate meetings with the Government of Nepal and relevant contractors and sub-contractors.

B. Workweek

A six-day workweek is authorized while in Nepal.

C. Technical Direction

The Team Leader and the locally hired consultant will be assisted by a representative from the General Development Office (GDO) and Program and Project Development (PPD) Office. The Director, GDO and/or his designee, together with representatives from PPD, will lead discussions to determine the technical feasibility of the consultants' approach and will supervise their work in Nepal. Consultants will be selected through a competitive process by USAID/Nepal. Timelines, methodology and the organization of documents will be approved in advance in writing by the GDO, as will subsequent changes or deviations.

VIII. Indicative Level of Effort

Task	**LOE (days)**
Desk review of program documents; travel to Nepal	3
Preparation of proposed methodology and meetings with USAID/Nepal staff	5
Field visits and interviews	7
Preparation of draft report	4
Presentation of findings, recommendations and discussion of draft	1
Preparation of final report	5
Total	25

Annex II: DRAFT Action Plan SIMI Evaluation for USAID

Tasks	Location	Time Frame	Output
Orientation with USAID staff	US embassy	April 27	
Briefing and prepared detailed schedule for field trips	SIMI office	April 27	Schedule for field trips
Read documents	Kathmandu	April 28, May 4, 6 - 9	Background information on project and situation
Field trip # 1	Tanahu Kaski Syangja Palpa	April 29 – May 3	Focus group discussions, interviews and findings for report and case studies
Meet with stakeholders and national partners: • CEAPREAD, SAPROS, AEC, and local NGOs. • APPSP, DLGSP, PAF, CDP, World Vision, others • MLD, DoA, MOAC • OVC program officers?	Kathmandu – various offices	May 4, 6 – 9	Focus group discussions, interviews and findings for report and case studies
Field trip #3 (day trip)	Lalitpur	May 5	Interviews and findings for report and case studies
Field trip #2	Banke Bardiya Surkhet (Hare)	May 12 – 15	Focus group discussions, interviews and findings for report and case studies
Meeting with EIG program staff	Kathmandu	Sometime between May 17 – 20?	learning used from SIMI
Preparation of draft report and power point presentation	Kathmandu	On-going and May 17-20	Written case studies and photographs
Presentation of findings, recommendations, and discussion of draft	Kathmandu	May 22	Comments from USAID
Preparation of final report	Kathmandu	May 23-27	Draft final report

Annex III: Achievements in other SIMI Subsectors

Subsector	Key Impacts	Future Development Needs / Opportunities (note all subsectors have strong market demand, coffee, tea, and essential oils have strong international demand)
Specialty Coffee	• Develop Internal Control System for smallholders and enable nearly 1,000 smallholders to be organically certified (largest # certified) • Initiated fair trade certification of Nepal coffee facilitating a fair trade FLO cert person to work with Industry and exploring alternative fair trade options • Intensive program to improve quality thru training and hands on monitoring at pulping stations • Processing quality improvement thru hosting a UN volunteer team from Kraft • Development of market linkages facilitating a 10 ton shipment to a new US based buyer and assistance in communication with international buyers. • Support for coffee alliance to address issues of the sector and coordinate with government	• Concerted effort to adopt management practices to control stem borer including healthy large sized seedlings, proper use of shade, and adequate plant nutrition. • Development or Nepal specific shade tree options for coffee production packages • Pocket based approaches to concentrate coffee production to improve economics of collection and processing • Continued efforts to improve processing quality • Development of fair trade market options • Development of coffee sector institutions to support coffee development • Establishment of a coffee cupping lab in Nepal to support the industry • International branding and marketing
Orthodox Tea	• Implementation of the code of conduct (CoC) program that certifies social and environmental responsibility and quality manufacturing • International branding of Nepal tea thru the unique CoC program • Penetration of the US Market by Nepal tea thru participation in trade shows and linkages developed by SIMI team • Initiation of developing IPM packages for tea in collaboration with the IPM CRSP • Support for development of a Nepal clonal tea varieity	• Support to expand the CoC program participation and to develop international recognition of the CoC approach (note other stakeholders are continuing support for CoC post SIMI) • There is a tremendous opportunity to develop a regional CoC program in South Asia. Tea industry stakeholders are interested to expand this approach • Branding and marketing of Nepal tea in international markets so that Nepal tea is exported directly at international prices • Development of IPM packages to support transformation of the industry to organic production
Fisheries	• Continued expansion and popularization of the Ujyalo smallholder fisheries model of smaller pond size with vegetable production and treadle pump • Institutionalization of the model thru partnership with government including investment by GoN in 100 fish ponds and recognition of the model at a national level workshop	• Tremendous opportunity for continued expansion of the approach • Development of service providers including hatcheries and nurseries in the mid and far west regions • There is a need to develop a finance model for fish pond construction that includes a longer term loan 3+ years linked to technical assistance.
Goat	• Development of a public private partnership model for goat subsector development that includes investment in dipping ponds and	• Large scale program to develop goat focused collection centers building on the project model

	social mobilization • Development of a model to establish local level goat collection centers which are crucial for farmers to receive remunerative prices and to be able to participate in markets	• Need for development of local service providers and the BDS approach in the goat subsector • Need to upgrade technical production practices (SIMI has relied on DLS for the technical part of the program)
Essential Oil	• Provided technical and social mobilization support that has enabled the successful establishment of seven closed boiler based distillation enterprises and over 70 direct fired units. This built on the work of BDS-MaPS. • Intensive training program in essential oil production and processing for multiple stakeholders including farmers, enterprises, government, and development organizations • Development of international and national market linkages and systems • Initiation of institutionalizing essential oil production and processing including linkage work between agriculture and forestry stakeholders • Program with DFID LFP program to extend the approach • Broadly have initiated new development opportunity	• Improvement in processing methods to achieve higher extraction and purity for additional value-added • Improvements in direct fired system to enable lower investment cost and better performance so that fuel wood is not needed. (IDE is initiating this in a modest program) • Opportunity to adapt the approach to establish distillation units in the Nepal hills. This will include development of smaller units as volumes will be lower in the hills and cultivation of essential oil crops suited to the hills. • Coordination and institutionalizing between forestry and agricultural stakeholders • Expansion of the opportunity which includes a heavy social mobilization approach to ensure that CFUGs and farmers are coordinated to produce appropriate material volumes for processing capacity • International branding and market development to develop direct international sales. NTFP/Essential oil markets are at an initial stage and there are opportunities to develop Nepal as a brand leader in NTFPs/Essential oil. Programs similar to the CoC / fair trade / organic certification would help in this area • Work in the selection of essential oil varieties and analysis of ingredients for international markets

Annex IV: SIMI-Major Achievements

Micro Irrigation Technology (MIT) (Till Dec 2008)

MIT	1st Phase	2nd Phase	3rd Phase	4th Phase	Total
Treadle Pump	16,486	12,635	4,950	651	34,722
Drip/Sprinkler	9,148	7,584	5,369	736	22,837
Others*	989	2,771	1,475	282	5,517
Total -	**26,623**	**22,990**	**11,794**	**1,669**	**63,076**

(* = Modified Thai Jar, Plastic House, Electric Pump, Diesel Pump)

Plastic House Technology (Till Dec 2008)

Farmer Group Formation (Till Dec 2008)	1st Phase	2nd Phase	3rd Phase	4th Phase	Total
Farmer Groups Formed	1,512	661	991	293	3,457
Male	14,321	7,745	7,924	1,846	31,836
Female	16084	7,093	12,335	3,083	38,595
Male/Female Total -	**30,405**	**14,838**	**20,259**	**4929**	**70,431**
Female % -	53%	48%	61%	62%	55%

(**HH=** Goat-2280, Fish-220, NTFP-1367, Coffee-1250)

Multiple Water Use System (Till June 2008)

Total MUS	49	7	56
Total Beneficiary HH	1,104	245	1,349
Total Beneficiary No.	7,487	1,979	9,466

Output Marketing (Till Sep 2008)

Marketing Committee	87
Cooperatives	22
Collection Center	90
Apex Body	5 - palpa-1,kaski-1,syangja-1,bardiya-1,surkhet-1

Major Trainings (Till Dec 2008)	1st Phase	2nd Phase	3rd Phase	4th Phase	Total
No. of Trainings	6,243	2,063	577	337	9,220
Male	55,378	18,595	3,983	2,202	80,158

Female	57,743	20,267	6,481	3,759	88,250
Male/Female Total -	**113,121**	**38,862**	**10,464**	**5961**	**168,408**

Vegetable Production Details (To June 2008)		**3rd Phase**	**Total**
Area of Production (Hectares)	9,919	604	10,523
Production (Metric Tons)	129,642	4,489	134,131
Income from Vegetables (Approx. US $ Milion.)	22.68	2.16	24.84
Households Involved in Vegetable Sales (Number)	46,000	16,112	62,112
Increase in Income from Vegetable Sales (/HH) US $	803	204	1007
		(Cumulative income of project period)	

Service Providers (Till Sep 2008)		**3rd Phase**	**Total**
Input Service Providers	2390	760	3150
Output Service Providers	176	443	619
Total -	**2,566**	**1,203**	**3,769**

Micro Credit (Till March 2008)		**3rd Phase**	**Total**
Number of Groups	180	21	201
Revolving Fund Disbursement (NRs.)	1,139,805	118,000	1,257,805
Number of MIT Purchased through RF	2,206	135	2,341
(100% Repayment)			

Collaboration with Government (DADO, Tanahun, Nawalparasi, Kavre) (Till Sep 2008)

	Tanahu	**Nawalparasi**	**Kavre**	**Total**
Group Working with	79	21	19	119
MIT Promotion	793	1,049	929	2,771

*1st phase =June 2003 ~ Sep 2005, ** 2nd phase =Oct 2005 ~ Sep 2007, ***3rd phase =Oct 2007 ~ Sep 2008, ****4th phase= Oct 2008~ June 2009.*

Annex V: Individuals interviewed during the SIMI Evaluation

Arjun Neupane	DADO-Tanahun
Narayan Shrestha	DM-Tanahun/SIMI
Krishna Khanal	DADO-Tanahun
Sriram Khanal	Shivashakti Samuha, Tanahun
Hom B Malla	Chair, Shivashakti Samuha, Tanahun
Navaraj Gautam	Treasurer, Shivashakti Samuha, Tanahun
Shiva Raj Poudel	JT, DADO-Tanahun
Kalpana Dhital	DM-Syangja/SIMI
Hari Kumari Gautam	Secretary, Agriculture Market Management Committee, Sarketari, Syangja
Jamuna Poudel	Member, Agriculture Market Management Committee, Sarketari, Syangja
Narahari Subedi	Vice-Chair, Agriculture Market Management Committee, Sarketari, Syangja
Bhagawati Khatun	Member, Agriculture Market Management Committee, Sarketari, Syangja
Gauri Shrestha	SIMI staff
Hari Subedi	Chair, Agriculture Market Management Committee, Sarketari, Syangja
Shiva P Subedi	Group mobilizer, Agriculture Market Management Committee, Sarketari, Syangja
Heema Lal Subedi	Member, Agriculture Market Management Committee, Sarketari, Syangja
Sangita	Dist Advisor, RPI, Palpa
Prem Pageni	NCPA-VP, Highland Coffee
Kamal Raj Khanal	DCPA, Palpa
Kamal Karki	DADO-Palpa
Parbati Shrestha	SIMI-Palpa
Shailendra	SIMI
Vinod Nepal	Program Officer, DDC-Palpa
Ram Prakash Parajuli	CA-DDC-Palpa
Chameli Devi Shrestha	WDO-Palpa
Durga Khan Thakuri	Chair, Bhagawati Coffee Production Samuha, Palpa
Bishnu Khanal	Chair, Rural Information Center, Harthok, Palpa
Tulasa Thapa	Operator, Rural Information Center, Harthok, Palpa
Laxmi Khanal	Chair, Harthok Ag Marketing Coop, Palpa
Radha Nepal	Member, Harthok Ag Marketing Coop, Palpaa
Bimala Gyawali	Vice-Chair, Harthok Ag Marketing Coop, Palpa
Rudra B Thapa	Ex-DM, SIMI, Palpa
Thirtha Udaya	AEC/SIMI
Ambika Bhattarai	OVC-SIMI
Khem Regmi	DM, Palpa
Sabitri Aryal	Ag technician, Palpa
Chandra B Gaha	Marketing Supervisor, SIMI, Palpa
Kanchha Man Lama	Marketing Supervisor, SIMI, Palpa
Kalpana Pokharal	AT Palpa
Gam B Gurung	AC, Butwal
Parbati Shrestha	PC, OVC
Prem B Thapa	Suryodaya Fresh Veg Production Samuha, Patneri, Lekhanath, Kaski
Lal B Tamang	Suryodaya Fresh Veg Production Samuha, Patneri, Lekhanath, Kaski
Buddhi Maya Gurung	Suryodaya Fresh Veg Production Samuha, Patneri, Lekhanath, Kaski
Bishnu KC	Suryodaya Fresh Veg Production Samuha, Patneri, Lekhanath, Kaski
Bini Maya Thapa	Suryodaya Fresh Veg Production Samuha, Patneri, Lekhanath, Kaski
Parwati Parajuli	Suryodaya Fresh Veg Production Samuha, Patneri, Lekhanath, Kaski

Madani Pokharel	Suryodaya Fresh Veg Production Samuha, Patneri, Lekhanath, Kaski
Deu Maya BK	Suryodaya Fresh Veg Production Samuha, Patneri, Lekhanath, Kaski
Sinha B Sunar	Suryodaya Fresh Veg Production Samuha, Patneri, Lekhanath, Kaski
Hari Maya KC	Apex Body Chair, Pokhara
Sita BK	Member, Srijanshil Samuha
Yam Subei	JTA Apex body, Pokhara
Shiva Kunwar	Makura Sanjal Marketing Committee
Guru Datta Dahal	Technical supervisor
Deepak Chaulagain	SIMI
Bhim Moktan	AC-Pokhara
Ved Kumar Shrestha	Highway Road Corridor Market Specialist
Raj Kumari Pariyar	Member, Makura Sanjal Marketing Committee
Kashi Raj Subedi	Secretary, Makura Sanjal Marketing Committee
Shova Subedi	Chair, Makura Sanjal Marketing Committee
Dil B Khatri	DM, Kaski
Bimala Rai	SIMI
Ambika Rai	SIMI
Hasana Gurung	Chair, Kalpana Veg Production Samuha, Dhikurpokhari
Nirmala Pariyar	Secretary, Kalpana Veg Production Samuha, Dhikurpokhari
Rupak Pariyar	Member, Kalpana Veg Production Samuha, Dhikurpokhari
Pushpa Pariyar	Member, Kalpana Veg Production Samuha, Dhikurpokhari
Pramila Pariyar	Member, Kalpana Veg Production Samuha, Dhikurpokhari
Dil Maya BK	Member, Kalpana Veg Production Samuha, Dhikurpokhari
Nau Maya BK	Member, Kalpana Veg Production Samuha, Dhikurpokhari
Siri BK	Member, Kalpana Veg Production Samuha, Dhikurpokhari
Ganga Sunar	Member, Kalpana Veg Production Samuha, Dhikurpokhari
Maya Sunar	Member, Kalpana Veg Production Samuha, Dhikurpokhari
Dilsubha Sunar	Member, Kalpana Veg Production Samuha, Dhikurpokhari
Rupa Sunar	Member, Kalpana Veg Production Samuha, Dhikurpokhari
Sunita Sunar	Member, Kalpana Veg Production Samuha, Dhikurpokhari
Mujun Sunar	Member, Kalpana Veg Production Samuha, Dhikurpokhari
Jau Maya Sunar	Member, Kalpana Veg Production Samuha, Dhikurpokhari
Jhalak Shrestha	Shree Complex ,Pokhara
Deepak Shrestha	Apex Body member, Pokhara
Dilli Ram Bhandari	Apex Body member, Pokhara
Tara P Paudel	Apex Body VC, Pokhara
Beni B Basnyat	DADO-Kaski
Nirmala Gurung	Regional Agricultural Directorate, Pokhara
Nar B KC	Regional Agricultural Directorate, Pokhara
Devaki Dulal	Namuna Women Farmer Samuha, Lele-7, Lalitpur
Sabitri Timalsina	Namuna Women Farmer Samuha, Lele-7, Lalitpur
Gyanu Dulal	Namuna Women Farmer Samuha, Lele-7, Lalitpur
Neeru Bajgain	Namuna Women Farmer Samuha, Lele-7, Lalitpur
Ram Sharan Timilsina	Nurseryman, Lele-7, Lalitpur
Goma Rana	Shree Ganesh Women Veg Production Samuha, Lele, Lalitpur
Binu Thapa	Shree Ganesh Women Veg Production Samuha, Lele, Lalitpur
Sanju Rana	Shree Ganesh Women Veg Production Samuha, Lele, Lalitpur
Lalit Rana	Shree Ganesh Women Veg Production Samuha, Lele, Lalitpur
Parwati Adhikari	Shree Ganesh Women Veg Production Samuha, Lele, Lalitpur
Bhawani Khadka	Shree Ganesh Women Veg Production Samuha, Lele, Lalitpur

Sabitri Khadka	Shree Ganesh Women Veg Production Samuha, Lele, Lalitpur
Aryal	DDG, DOA
	DG, DOA
Kanchan Pandey	Planning Section, DOA
Prabhakar Pathak	DG, DOLS
Khadga P Paudel	Horticulture Research Division, NARC, Khumaltar
Sreemat Shrestha	Engineering Division, NARC, Khumaltar
Deep B Swar	Ex-Secretary, MOAC
Govinda Raj Pandey	Ex-Secretary, MOAC
Genesh KC	Ex-Secretary, MOAC
Bhairab R Kaini	Ex-DG, DOA
Kukti Rijal	IGD
Bharat Upadhyaya	CEAPRED
Narendra KC	SAPROSC
DR Shakya	AEC
Manik Ratna Shakya	AEC
Purushottam Mainali	Joint Secretary, MOAC
Surya Acharya	Joint Secretary, MOH
Niranjan Pandey	Non-Conventional Technology Development, DOI
Krishna Ghimire	Highland Coffee
Shyam P Bhandari	Nepal Coffee
Bhabeshwar Pageni	
Dhakesharan Ghimire	Nepal Coffee Co. Palpa
Dilli Banskota	HOTPA/MIMCO
Shushil Bhattachan	JICA-Nepal
Kalpana Kunwar	JICA-Nepal
Vinod Mishra	JICA-Nepal
Narendra Gurung	JICA-Nepal
Somlal Subedi	Joint Secretary, MLD
Sher B Gharti	Manager, DU Banke
Gopi P Wali	DU, Banke
Bhadra B KC	Pragatishil Livestock Samuha
Hari Sharma	Pragatishil Livestock Samuha
Bhim Bahadur	Pragatishil Livestock Samuha
Laxmi KC	Pragatishil Livestock Samuha
Namlali Wali	Pragatishil Livestock Samuha
Nirkala Wali	Pragatishil Livestock Samuha
Pradeep Rokaya	DM, SIMI/Banke
Man B BK	Pragatishil Livestock Samuha
Bal B KC	Pragatishil Livestock Samuha
Jeet b Chaudhary	Pragatishil Livestock Samuha
Vijaya Sthapit	SIMI
Ranjita Acharya	Member, Ag Product Market Management Committee, Kohalpur
Dhana Basnet	Ag Product Market Management Committee, Kohalpur
Chitrakal Pathak	Manager, Ag Product Market Management Committee, Kohalpur
Chabilal Bhattarai	Chair, Ag Product Market Management Committee, Kohalpur
Laxmi P sharma	SIMI/Banke
Yukta	EIG, FNCCI
Pradeep Maharjan	EIG, Ag
Ganga Rai	Ag, IDE

Samyog Nepal	EIG
Sharad Paudel	DEPROSC
Suman Koirala	DEPROSC
Gautam Bajracharya	USAID
Phiru Tharu	Fish Fingerling producer, Banke
Karabir Thapa Magar	Fish farmer, Pahadipur, Naubasta, Banke
Sushila Thapa	Fish farmer, Pahadipur, Naubasta, Banke
Balkumari Sunar	Fish farmer, Pahadipur, Naubasta, Banke
Chandra Kumari Sunar	Fish farmer, Pahadipur, Naubasta, Banke
Usha Thapa	Fish farmer, Pahadipur, Naubasta, Banke
Purna B Thapa	Fish farmer, Pahadipur, Naubasta, Banke
Resham Sharma	Fish farmer, Pahadipur, Naubasta, Banke
Amar B Sunar	Fish farmer, Pahadipur, Naubasta, Banke
Pradeep Sunar	Fish farmer, Pahadipur, Naubasta, Banke
Tul B Thaa	Fish farmer, Pahadipur, Naubasta, Banke
Nar B Thapa	Fish farmer, Pahadipur, Naubasta, Banke
Dev B KC	Treadle Pump dealer, Banke
Janak Bhandari	DLSO, Banke
Yadab Khanal	DLSO, Banke
Pushapa	DLSO, Banke
Shyam Acharya	DFO, Banke
Kedar Nath Sharma	LDO, Banke
Girish Mishra	DADO, Banke
Bharat Pokharel	DADO, Banke
Md Yakub Ansari	JABAN, Nepalganj
Pushkar Kharel	JABAN, Nepalganj
Niranjan	JABAN, Nepalganj
Abdul Ali	JABAN, Nepalganj
Jakruk Hussain	JABAN, Nepalganj
Afisul Ali	JABAN, Nepalganj
Tanka Prasad	JABAN, Nepalganj
Govind Gyawali	ADB, Nepal

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